

# Nemorubicin

Catalog No: tcsc2020



## Available Sizes

**Size:** 1mg

**Size:** 5mg

**Size:** 10mg



## Specifications

**CAS No:**

108852-90-0

**Formula:**

$C_{32}H_{37}NO_{13}$

**Pathway:**

Others

**Target:**

Others

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 47$  mg/mL (73.02 mM)

**Alternative Names:**

Methoxymorpholinylidoxorubicin;PNU 152243;PNU-152243A

**Observed Molecular Weight:**

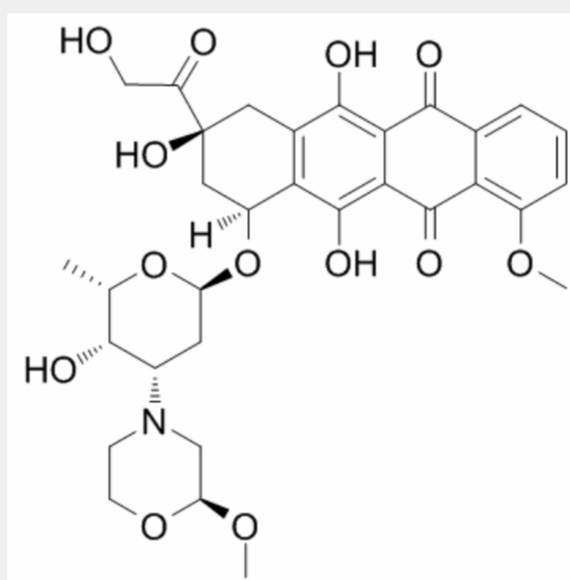
643.64

## Product Description

Nemorubicin is a derivative of doxorubicin, and has antitumor activity.

**In Vitro:** Nemorubicin has antitumor activity, with  $IC_{70}$ s of  $578 \pm 137$  nM,  $468 \pm 45$  nM,  $193 \pm 28$  nM,  $191 \pm 19$  nM,  $68 \pm 12$  nM, and  $131 \pm 9$  nM for HT-29, A2780, DU145, EM-2, Jurkat and CEM cell lines, respectively<sup>[1]</sup>. Nemorubicin acts through nucleotide excision repair (NER) system to exert its activity. Nemorubicin (0-0.3  $\mu$ M) is more active in the L1210/DDP cells with intact NER than in the XPG-deficient L1210/0 cells. Cells resistant to nemorubicin show increased sensitivity to UV damage<sup>[3]</sup>. Nemorubicin is cytotoxic to 9L/3A4 cells, with an  $IC_{50}$  of 0.2 nM, 120-fold lower than that of P450-deficient 9L cells ( $IC_{50}$ , 23.9 nM). Nemorubicin also potently inhibits Adeno-3A4 infected U251 cells with  $IC_{50}$  of 1.4 nM. P450 reductase overexpression enhances cytotoxicity of Nemorubicin<sup>[4]</sup>.

**In Vivo:** Nemorubicin is converted to PNU-159682 by human liver cytochrome P450 (CYP) 3A4 in rat, mouse, and dog liver microsomes<sup>[2]</sup>. Nemorubicin (60  $\mu$ g/kg) induces significant tumor growth delay in scid mice bearing 9L/3A4 tumors, but shows no obvious effect on the tumor growth delay of 9L tumors in mice by i.v. or intratumoral injection (i.t.). Nemorubicin (40  $\mu$ g/kg, i.p.) exhibits no antitumor activity and no host toxicity in mice bearing 9L/3A4 tumors<sup>[4]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!